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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/531,658	03/20/2000	Seng-Wook Sim	P992084	5856

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EXAMINER
MILLER, BRANDON J

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/531,658	Applicant(s) SIM ET AL.	
	Examiner Brandon J Miller	Art Unit 2683	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____ .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-43* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-43* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *20 March 2000* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1, 3-9, 11-16, 18-24, and 26-43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Alperovich in view of Payne.

Regarding claim 1 Alperovich teaches a data transmission apparatus for a digital mobile station (see col. 2, lines 19-21 and FIG. 2). Alperovich also teaches forming generated data transmission headers into data of a short message service message and a short message transmitting section for transmitting short message service messages, which include user data of a short message service message (col. 3, lines 30-35 and FIG.2). Alperovich does not teach an encoding section for reading and encoding data in a predetermined form, a data transmission header generating section for generating distinction data transmission headers corresponding to encoded data, or a data storage section for storing data to be transmitted. Payne teaches an encoding section for reading and encoding data in a predetermined form (see col. 14, lines 41-44). Payne teaches a data transmission header generating section for generating distinction data transmission headers corresponding to encoded data (see col. 11, lines 37-39 & 48-50). Payne also teaches a data storage section for storing data to be transmitted (see col. 23, lines 5-14). It would have been obvious to one of ordinary skill in the art at the time the invention was made to make the Alperovich adapt to include an encoding section for reading and encoding data in a

predetermined form, a data transmission header generating section for generating distinction data transmission headers corresponding to encoded data, and a data storage section for storing data to be transmitted because this would allow for a variety of data to be transmitted and received using a digital mobile station.

Regarding claim 3 Payne teaches a data header field for distinctively identifying transmitted data and a transmitted data field allocated with encoded transmitted data (see col. 11, lines 37-40 and col. 13, lines 1-5).

Regarding claim 4 Payne teaches a data transmitting header field that includes a transmitted data distinction field, a transmitting part distinction field, and a field for distinction of a kind of transmitted data (see col. 11, lines 36-39 and lines 48-50).

Regarding claim 5 Payne teaches a field that has a predetermined field length, which is allocated with the encoded data corresponding to a field length and data block termination (see col. 15, lines 62-67 and col. 22, lines 20-24).

Regarding claim 6 Alperovich teaches forming blocks added with data transmission headers into data of a short message service (see col. 3, lines 30-35 and FIG. 3). Payne teaches dividing data into blocks having a proper amount of data and adding the data transmission headers having different transmission orders to the respective divided blocks (see col. 13, lines 16-23).

Regarding claim 7 Alperovich teaches short message blocks formed by adding a short messages service header with data of a short message service (see col. 4, lines 9-11 and FIG. 3).

Regarding claim 8 Alperovich teaches a short message service that sequentially transmits a short message service message with reference to transmission orders added to headers (see col. 4, lines 21-30).

Regarding claim 9 Alperovich teaches a data receiving apparatus for a digital mobile station (see col. 2, lines 19-21 and FIG. 2). Alperovich teaches a data transmission header detection section for detecting and analyzing data transmission headers from short message service message messages and receiving short message service messages (see col. 3, lines 30-48). Alperovich also teaches storing short message service blocks (see col. 2, lines 15-16). Alperovich does not teach an encoding section for reading and encoding data in a predetermined form, distinctively determining storage regions of data according to a result of analyzing data transmission headers, or a data decoding section. Payne teaches an encoding section for reading and encoding data in a predetermined form (see col. 14, lines 41-44). Payne teaches distinctively determining storage regions of data according to a result of analyzing data transmission headers (see col. 13, lines 38-40 & 60-64). Payne also teaches a data decoding section (see col. 19, lines 58-60). It would have been obvious to one of ordinary skill in the art at the time the invention was made to make the Alperovich adapt to include an encoding section for reading and encoding data in a predetermined form, distinctively determining storage regions of data according to a result of analyzing data transmission headers, and a data decoding section because this would allow for a variety of data to be transmitted and received using a digital mobile station.

Regarding claim 11 Alperovich teaches detecting from a received short message service message, data included in a data header field for the distinction of transmitted data (see col. 3,

lines 30-48) and Payne teaches a transmitted data field allocated with encoded transmitted data (see col. 13, lines 1-5).

Regarding claim 12 Alperovich teaches a transmission header detection that detects code data from a data header field including a transmitted data distinction field, a transmitting part distinction field, and a field for distinction of a kind of transmitted data (see col. 4, lines 17-25, 28-30, & 34-36).

Regarding claim 13 Alperovich teaches a data transmission header detecting section (see col. 3, lines 30-48) and Payne teaches detecting a block termination flag, which indicates final data (col. 22, lines 18-24).

Regarding claim 14 Alperovich teaches storing received short message service messages (see col. 2, lines 15-20) and Payne teaches distinctively determining storage regions of data block according to a result of analyzing data transmission headers (see col. 13, lines 38-40 & 60-64).

Regarding claim15 Alperovich teaches transmitting data for a digital mobile station (see col. 2, lines 40-44 and FIG. 2). Alperovich teaches forming generated data transmission headers into data of a short message service and a short message transmitting section for transmitting short message service messages, which include the user data of a short message service (see col. 1, lines 32-34, col. 3, lines 30-35 and FIG.2). Alperovich does not teach an encoding section for reading and encoding data in a predetermined form, a data transmission header generating section for generating distinction data transmission headers corresponding to completion of encoded data, or a data storage section for storing data. Payne teaches an encoding section for reading and encoding data in a predetermined form (see col. 14, lines 41-44). Payne teaches a

data transmission header generating section for generating distinction data transmission headers corresponding to completion of encoded data (see col. 11, lines 37-39 & 48-50). Payne also teaches a data storage section for storing data (see col. 23, lines 5-14). It would have been obvious to one of ordinary skill in the art at the time the invention was made to make the Alperovich adapt to include an encoding section for reading and encoding data in a predetermined form, a data transmission header generating section for generating distinction data transmission headers corresponding to completion of encoded data, and a data storage section for storing data because this would allow for a variety of data to be transmitted and received using a digital mobile station.

Regarding claim16 Alperovich teaches comparing an amount of encoded data with that of readout data and using selected data and generated header data to form data of a short message (see col. 3, lines 29-31 and col. 4, lines 50-59).

Regarding claim 18 Payne teaches generating a data header that includes a transmitted data distinction field, a field for a whole number of blocks of encoded data, a transmitting part distinction field, and a field for distinction of a kind of transmitted data (see col. 11, lines 36-39 and lines 45-50).

Regarding claim 19 Alperovich teaches adding short message service transmission headers (see col. 4, lines 9-11). Payne teaches making encoded data into blocks with a predetermined amount of data if an amount of encoded data is larger than a predetermined amount of data (see col. 13, lines 1-5). Payne teaches adding inherent data transmission headers to data blocks (see col.11, lines 48-50) and transmitting data blocks in a predetermined order (see col. 11, lines 36-39).

Regarding claim 20 Payne teaches block termination, which indicates final data (col. 22, lines 18-24).

Regarding claim 21 Alperovich teaches detecting whether short message service messages are received in a standby state and detecting whether the detected short message service messages include predetermined distinction data transmission headers (see col. 4, lines 41-48). Alperovich teaches analyzing data transmission headers and decoding received short message service blocks according to a result of analysis if data transmission headers include predetermined distinction data (see col. 4, lines 17-21 & 26-30). Alperovich does not teach storing message data blocks in succession to previously processed message data blocks. Payne teaches storing message data blocks in succession to previously processed message data blocks (see col. 23, lines 5-14). It would have been obvious to one of ordinary skill in the art at the time the invention was made to make the Alperovich adapt to include storing message data blocks in succession to previously processed message data blocks because this would allow for a variety of data to be transmitted and received using a digital mobile station.

Regarding claim 22 Alperovich teaches detecting whether a transmitted distinction code for distinction of transmitted data is included in a distinction data transmission header (see col. 4, lines 26-30 & lines 32-36).

Regarding claim 23 Alperovich teaches detecting and analyzing a transmitted data distinction code for distinction of the transmitted data (see col. 3, 30-48). Payne teaches a code for a whole number of blocks of encoded data, a code for a transmission order of the encoded data, a transmitting part distinction field, and a field for distinction of a kind of the transmitted data (see col. 11, lines 34-39 & 43-50).

Regarding claim 25 Payne teaches storing message data in a different storage region from that of previously processed and stored message data (see col. 23, lines 5-9).

Regarding claim 26 Alperovich teaches data in a short message service transmission mode and adding short message headers to data blocks (see col. 2, lines 40-43 and col. 4, lines 9-11). Alperovich does not teach reading and encoding data and making encoded data into blocks of a predetermined unit, generating data transmission headers to data blocks, or transmitting data blocks in a predetermined order. Payne teaches reading and encoding data and making encoded data into blocks of a predetermined unit (see col. 13, lines 1-5). Payne teaches generating data transmission headers to data blocks (see col.11, lines 48-50) and transmitting data blocks in a predetermined order (see col. 11, lines 23-29). It would have been obvious to one of ordinary skill in the art at the time the invention was made to make the Alperovich adapt include reading and encoding data and making encoded data into blocks of a predetermined unit, generating data transmission headers to data blocks, and transmitting data blocks in a predetermined order to because this would allow a variety of data to be transmitted and received using a digital mobile station.

Regarding claim 27 Payne teaches generating a data header that includes a transmitted data distinction field, a field for a whole number of blocks of encoded data, a field for transmission order, a transmitting part distinction field, and a field for distinction of a kind of transmitted data (see col. 11, lines 36-39 and lines 45-50).

Regarding claim 28 Payne teaches sequentially transmitting data blocks with reference to a field for the transmission order of encoded data (see col. 11, lines 43-50).

Regarding claim 29 Alperovich teaches displaying a state of blocks with reference to generated transmission headers (see col. 4, lines 26-31).

Regarding claim 30 Alperovich teaches adding short message service headers to data blocks (see col. 4, lines 9-11). Alperovich does not teach dividing encoded data into blocks of a predetermined unit, generating data transmission headers corresponding to divided data blocks, or adding generated data transmission headers to divided data blocks. Payne teaches dividing encoded data into blocks of a predetermined unit (see col. 13, lines 20-21). Payne teaches generating data transmission headers corresponding to divided data blocks and adding generated data transmission headers to divided data blocks (see col. 13, lines 16-23). It would have been obvious to one of ordinary skill in the art at the time the invention was made to make the Alperovich adapt to include dividing encoded data into blocks of a predetermined unit, generating data transmission headers corresponding to divided data blocks, and adding generated data transmission headers to divided data blocks because this would allow a variety of data to be transmitted and received using a digital mobile station.

Regarding claim 31 Payne and Alperovich teach a device as recited in claim 20 and is rejected given the same reasoning as above.

Regarding claim 32 Payne and Alperovich teach a device as recited in claim 27 and is rejected given the same reasoning as above.

Regarding claim 33 Payne teaches a coding type distinction field for indicating an encoding type (see col. 15, lines 62-67).

Regarding claim 34 Payne teaches an extension field applied and used according to the intent of a service provider (see col. 30, lines 17-21).

Regarding claim 35 Alperovich teaches a short message service data structure that includes a user data field region including a short message service header field that includes a short message service header (see col. 3, lines 30-39). Alperovich does not teach a data header that includes a transmitted data distinction field, or a transmitted data field including encoding transmitted data. Payne teaches a data header that includes a transmitted data distinction field and a transmitted data field including encoding transmitted data (see col. 11, lines 36-39 & 43-44). It would have been obvious to one of ordinary skill in the art at the time the invention was made to make the Alperovich adapt to include a data header that includes a transmitted data distinction field, and a transmitted data field including encoding transmitted data because this would allow a variety of data to be transmitted and received using a digital mobile station.

Regarding claim 36 Payne and Alperovich teach a device as recited in claim 27 and is rejected given the same reasoning as above.

Regarding claim 37 Alperovich and Payne teach a device as recited in claim 36 except for a transmitted data distinction field composed of 2 bytes, a field for a whole number of blocks of encoded data composed of 4 bits, a field for the transmission order of encoded data composed of 4 bits, a transmitting part distinction field composed of 4 bytes, a distinction field of a kind of transmitted data composed of 2 bytes, a transmitted data field composed of predetermined bytes set by a system, an encoding type distinction field composed of 6 bits, or a block termination distinction field composed of 6 bits. Payne teaches a transmitted data distinction field, a field for a whole number of blocks of encoded data, a field for transmission order, a transmitting part distinction field, a field for distinction of a kind of transmitted data, a transmitted data field, an encoding type distinction field, and a block termination code, which indicates final data (see col.

11, lines 36-50 & col. 15, lines 62-67 & col. 22, lines 18-24). It would have been obvious to one of ordinary skill in the art at the time the invention was made to make the Payne adapt to include a transmitted data distinction field composed of 2 bytes, a field for a whole number of blocks of encoded data composed of 4 bits, a field for the transmission order of encoded data composed of 4 bits, a transmitting part distinction field composed of 4 bytes, a distinction field of a kind of transmitted data composed of 2 bytes, a transmitted data field composed of predetermined bytes set by a system, an encoding type distinction field composed of 6 bits, and a block termination distinction field composed of 6 bits because this would allow for data flow control specified by the data field size.

Regarding claim 38 Payne teaches a device as recited in claim 33 and is rejected given the same reasoning as above.

Regarding claim 39 Alperovich and Payne teach a device as recited in claim 37 and is rejected given the same reasoning as above.

Regarding claim 40 Payne teaches a block termination field for termination of a block (see col. 22, lines 18-24).

Regarding claim 41 Alperovich and Payne teach a device as recited in claim 37 and is rejected given the same reasoning as above.

Regarding claim 42 Alperovich teaches adding short message service headers to data blocks (see col. 4, lines 9-11). Alperovich teaches a short message service block transmitting and receiving section for transmitting and receiving short message service messages in a digital mobile station (see col. 2, lines 40-44, col. 4, lines 9-11and FIG. 2). Alperovich teaches a transmitted data storage section for storing transmitted and received short message service

messages (see col. 2, lines 12-18). Alperovich does not teach data coding for encoding transmitted data and dividing encoded data into blocks of a predetermined unit, a data decoding section, generating data transmission headers corresponding to data blocks and detecting and analyzing a transmission headers data distinction, or designating a storage order of data blocks according to a result of analyzing detected transmission headers. Payne teaches data coding for encoding transmitted data and dividing encoded data into blocks of a predetermined unit (see col. 13, lines 20-21 and col. 14, lines 41-44). Payne teaches a data decoding section (see col. 6, lines 33-37). Payne teaches generating inherent data transmission headers corresponding to data blocks and detecting and analyzing a transmission headers data distinction (see col. 13, lines 16-23). Payne also teaches designating a storage order of data blocks according to a result of analyzing detected transmission headers (see col. 13, lines 38-40 & 60-64). It would have been obvious to one of ordinary skill in the art at the time the invention was made to make the Alperovich adapt to include data coding for encoding transmitted data and dividing encoded data into blocks of a predetermined unit, a data decoding section, generating data transmission headers corresponding to data blocks and detecting and analyzing a transmission headers data distinction, and designating a storage order of data blocks according to a result of analyzing detected transmission headers because this would allow a variety of data to be transmitted and received using a digital mobile station.

Regarding claim 43 Alperovich teaches a display section for displaying a state of a short message service transmitted and received according to a result of analyzing detected transmission headers (see col. 4, lines 21-30).

Claims 2, 10, 17, and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Alperovich in view of Payne and Goris.

Regarding claim 2 Alperovich and Payne teach a device as recited in claim 1 except for coding data by a run length code. Goris teaches using a run length coding to code data (see col. 9, lines 4-7). It would have been obvious to one of ordinary skill in the art at the time the invention was made to make the Alperovich and Payne adapt to include a run length code to encode data because this would allow an alternate form of coding to be used for varying data.

Regarding claim 10 Alperovich, Payne and Goris teach a device as recited in claim 2 and is rejected given the same reasoning as above.

Regarding claim 17 Alperovich, Payne and Goris teach a device as recited in claim 2 and is rejected given the same reasoning as above.

Regarding claim 24 Alperovich, Payne and Goris teach a device as recited in claim 2 and is rejected given the same reasoning as above.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Kennedy U.S Patent No. 6,240,295 discloses data messaging in a communications network using a feature request

Hartmaier U.S Patent No. 6,304,753 discloses integration of voice and data services provided to a mobile wireless device.

Yoshikawa U.S Patent No. 6,253,093 discloses a wireless communication system, fixed station device and mobile station device.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brandon J Miller whose telephone number is 703-305-4222. The examiner can normally be reached on Mon.-Fri..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Trost can be reached on 703-308-5318. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9314 for regular communications and 703-872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

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June 6, 2002

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